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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,370	04/29/2002	Valeri Kiselev	AC FZJ 4903 (JT-8)	7935

7590 05/30/2003
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P O Box 2207
Wilmington, DE 19899-2207

EXAMINER

VARGAS, DIXOMARA

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,370

Applicant(s)

KISELEV ET AL.

Examiner

Dixomara Vargas

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
DEVELOPMENT.

(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program
listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables
having more than 50 pages of text are permitted to be submitted on compact
discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Foo et al. (US 5,604,435).

With respect to claims 1 and 19, Foo discloses a computer for analyzing data from nuclear magnetic resonance (Figure 3, #42), whereby the data contains at least one relaxation signal of a sample, characterized to that the computer operates with at least one analyzing means that separates the data into at least two parts that are differently dependent on an echo time TE (Column 6, lines 61-67).

6. With respect to claim 2, Foo discloses analyzing means separates the data into at least one part that is dependent on an echo time TE and into at least one more component that is not dependent on the echo time TE and whereby the analyzing means acquires the signals that are dependent on an echo time TE as activation signals (Columns 6 and 7, lines 61-67 and 1-14 respectively).

7. With respect to claim 3, Foo discloses at least one computer (Figure 3, #42).

8. With respect to claim 4, Foo discloses the data is separated into at least two parts having a different dependence on an echo time TE (Column 6, lines 61-67).

9. With respect to claim 5, Foo discloses the intensity values of the measured data are acquired and separated into at least two different dependencies on the echo time TE (Column 6, lines 61-67, Abstract).
10. With respect to claim 6, Foo discloses a measure of a statistical variation of the intensities is determined (Columns 3 and 4, lines 1-16 and 1-7 respectively).
11. With respect to claims 7 and 14, Foo discloses a standard deviation of the intensities is ascertained (Columns 3 and 4, lines 1-16 and 1-7 respectively).
12. With respect to claim 8, Foo discloses relaxation signal is divided into at least one part that is dependent on time TE and into at least one part that is not dependant on the echo time TE (Columns 6 and 7, lines 61-67 and 1-14 respectively).
13. With respect to claim 9, Foo discloses one signal is determined that is proportional to TE $\exp(-TE / T2^*)$ (Column 1, line 66; equation 2).
14. With respect to claims 10, 17 and 18, Foo discloses $T2^*$ is ascertained with the formula $S = S_0 \exp(-TE / T2^*) + g$ (Column 2, lines 55-67; Abstract).
15. With respect to claim 11, Foo discloses that the statistical fluctuations of $\Delta T2^*$ are ascertained (Column 2, lines 55-67; Abstract).
16. With respect to claims 12 and 15, Foo discloses a standard deviation $\sigma(\Delta T2^*)$ is ascertained (Column 2, lines 1-20 and 55-67; Abstract).
17. With respect to claims 13, 16 and 21, Foo discloses a quotient $\sigma(\Delta T2^*)/T2^*$ is formed and acquired as a measure of an activity (Column 2, lines 1-20 and 55-67; Abstract).
18. With respect to claim 20, see rejection of claims 9-16 above.

Art Unit: 2859

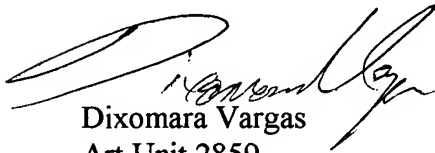
Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional prior art cited in the PTO 892 discloses NMR methods including different data sets with different echo times.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (703) 305-5705. The examiner can normally be reached on 8:00 am. to 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (703) 308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.



Dixomara Vargas
Art Unit 2859
May 23, 2003



Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800